A1

a. mixing a sample of blood from a pregnant woman with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. determining that the sex of the fetus is female if the shape of the strand pattern is approximately circular or polygonal, or that the sex of the fetus is male if the shape of the strand pattern is generally linear or generally linear in combination with at least one elongated ring.

2. **(Amended)** A method of determining the sex of a fetus comprising:

a. mixing a sample of blood from a pregnant woman with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 μl of Tris-buffer;

ii. adding approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 μl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 μl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 μl of chloroform and approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately 25 μl of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately 1.0 μl of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. determining that the sex of the fetus is female if the shape of the strand pattern is approximately circular or polygonal, or that the sex of the fetus is male if

the shape of the strand pattern is generally linear or generally linear in combination with at least one elongated ring.

3. **(Amended)** The method of claim 1 or 2 in which the Tris-buffer consists of 0.5 M Tris, 0.2 M EDTA, 0.6% NaCl, having a pH of between 10.3 and 10.4.

4. **(Amended)** The method of claim 1 or 2 in which the step of centrifuging the first blood cell mixture is performed for approximately ten (10) minutes at 11,000 rpm.

5. **(Amended)** The method of claim 1 or 2 in which the step of centrifuging the second blood cell mixture is performed for approximately fifteen (15) minutes at 11,000 rpm.

6. **(Amended)** The method of claim 1 or 2 in which the step of cooling the second liquid phase is performed by placing the second liquid phase on ice for approximately fifteen (15) minutes.

7. **(Amended)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of blood from a human donor with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. using the strand pattern to detect a change in the body of the human donor.

8. **(Amended)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of the human blood with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 μl of Tris-buffer;

ii. adding approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 μl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 μl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 μl of chloroform and

approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately 25 μl of freshly made 20% acid alcohol on a slide; and

i. adding a blood cell sample consisting of approximately 1.0 μl of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. using the strand pattern to detect a change in the body of the human donor.

9. **(Amended)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of blood from a human donor with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which is not smooth throughout most of the strand's length.

10. **(Amended)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of blood from a human donor with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

cond'd A1

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which has a plurality of beads and a substantial discontinuity with associated branching.

Please ADD the following NEW Claims 11-20:

11. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

A2

a. mixing a sample of blood from a human donor with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which has a looped portion and a substantial discontinuity with associated branching.

12. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of the human blood with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 μl of Tris-buffer;

ii. adding approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 μl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 μl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 μl of chloroform and approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately 25 μl of freshly made 20% acid alcohol on a slide; and

i. adding a blood cell sample consisting of approximately 1.0 μl of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which is not smooth throughout most of the strand's length.

13. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of the human blood with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 μl of Tris-buffer;

ii. adding approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 μl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 μl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 μl of chloroform and approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately 25 μl of freshly made 20% acid alcohol on a slide; and

i. adding a blood cell sample consisting of approximately 1.0 μl of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which has a plurality of beads and a substantial discontinuity with associated branching.

14. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of the human blood with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 µl of Tris-buffer;

ii. adding approximately 2.5 µl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 µl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 µl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 µl of chloroform and approximately 2.5 µl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately 25 µl of freshly made 20% acid alcohol on a slide; and

i. adding a blood cell sample consisting of approximately 1.0 µl of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. detecting a change in the body of the human donor if the strand pattern comprises a strand which has a looped portion and a substantial discontinuity with associated branching.

15. **(New)** The method of claim 7, 8, 9, 10, 11, 12, 13 or 14 in which the Tris-buffer consists of 0.5 M Tris, 0.2 M EDTA, 0.6% NaCl, having a pH of between 10.3 and 10.4.

16. **(New)** The method of claim 7, 8, 9, 10, 11, 12, 13 or 14 in which the step of centrifuging the first blood cell mixture is performed for approximately ten (10) minutes at 11,000 rpm.

17. **(New)** The method of claim 7, 8, 9, 10, 11, 12, 13 or 14 in which the step of centrifuging the second blood cell mixture is performed for approximately fifteen (15) minutes at 11,000 rpm.

18. **(New)** The method of claim 7, 8, 9, 10, 11, 12, 13 or 14 in which the step of cooling the second liquid phase is performed by placing the second liquid phase on ice for approximately fifteen (15) minutes.

19. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of blood from a human donor with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately one (1) volume of Tris-buffer;

ii. adding approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately one (1) volume of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately two (2) volumes of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately a half (½) volume of chloroform and approximately a half (½) volume of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;

g. cooling the second liquid phase and second blood cell debris thereby causing the structural components of the DNA complex within the second liquid phase to aggregate;

h. placing an acid alcohol sample consisting of approximately twelve and a half (12½) volumes of freshly made 20% acid alcohol on a slide;

i. adding a blood cell sample consisting of approximately one fifth (1/5) volume of the cooled second liquid phase onto the center of the top surface of the acid alcohol sample and allowing both samples to dry at room temperature without any disturbance, whereby an aggregate of the DNA complex deposits a strand pattern on the slide; and

j. using the strand pattern to detect a change in the body of the human donor.

20. **(New)** A method of detecting a change in the body of a human being caused by a pathological condition, comprising:

a. mixing a sample of the human blood with an anticoagulant to form an anti-coagulated blood mixture;

b. centrifuging the anti-coagulated blood mixture in order to separate the plasma from the blood cells;

c. preparing a first blood cell mixture in accordance with the following steps:

i. preparing approximately 5 μl of Tris-buffer;

ii. adding approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer, to the approximately 5.0 μl of Tris-buffer to produce a buffer diluted phenol; and

iii. adding approximately 10 μl of the blood cells to the buffer diluted phenol;

d. centrifuging the first blood cell mixture to form a first liquid phase and first blood cell debris;

e. preparing a second blood cell mixture by mixing the centrifuged first blood cell mixture and first blood cell debris with approximately 2.5 μl of chloroform and approximately 2.5 μl of Tris-buffer saturated phenol, prepared by mixing re-distilled phenol with Tris-buffer;

f. centrifuging the second blood cell mixture to form a second liquid phase and second blood cell debris;